equipment to effectively complete the remedial process. The Contractor shall be required to provide all labor and equipment necessary to load the containers or roll-offs onto receiving rail cars or trailers for offsite transport.

The Contractor shall be provided with an EPA identification number for disposal purposes by the Owner's Site Representative. The Contractor shall be responsible for complying with the manifest system and record keeping, as presented in Sections 1.8.5 and 1.9. The Contractor shall prepare an appropriate manifest for offsite treatment, storage or disposal of the excavated soils. The Contractor shall be authorized by the Owner to act as the Owner's Representative for preparation of, and signing of, the manifest. Manifest requirements are discussed in Section 1.8.5 of this document.

The Contractor shall supply all necessary labor and containers or packages for transporting the excavated soils, decontamination and laboratory waste offsite. The containers used for the transport of the soils and waste must be in accordance with the applicable DOT regulations on packaging and 49 CFR Parts 173, 178 and 179. The Contractor shall label all containers in accordance with DOT regulations regarding transport of hazardous materials under 49 CFR Part 172. The Contractor shall supply and use all appropriate placards according to DOT regulations for hazardous materials and 49 CFR Part 172.

1.8.5 Manifests

The Contractor shall be responsible for all applicable record keeping requirements, including manifests, in accordance with 40 CFR Subpart B, Part 262.20. The Contractor shall designate either the treatment or disposal facility that is permitted to handle the waste (see Section 1.8.6). The Contractor shall obtain and complete all New York State manifests, as required by 6NYCRR Subpart B, Part 371. The Contractor shall supply sufficient copies of the manifests in

order to provide each transporter, each designated facility and an additional copy to be returned to the generator. The Contractor shall be required to obtain all transporter signatures and dates.

The Contractor shall ensure that the manifests accompany the hazardous waste during transport activities. The Contractor shall obtain the date and signature of a representative of the receiving facility on each manifest.

The Contractor shall be responsible for hazardous waste discharges as defined by 40 CFR Subpart C 263.30 regarding immediate actions and 263.31 discharge clean-up.

1.8.6 Treatment or Disposal

The Contractor shall provide all labor and equipment for the treatment and disposal of all soils containing PCBs greater than 500 ppm, approximately 36 cubic yards. The Contractor shall treat soils in excess of 500 ppm by incineration. The retained incinerator must comply with the requirements of 40 CFR 761.70. The Contractor shall be permitted to retain an incinerator for treatment purposes from those presented on table 2. The Contractor shall dispose of the treated ash generated from the destruction of the PCB soils by the incinerator at the Aptus facility in Coffeeville, Kansas, a USEPA permitted facility.

Soils containing PCB concentrations greater than 500 ppm will be loaded directly into 1 cubic yard, corrugated hazardous waste shipping containers. Containerized soil will be transported offsite by truck.

The Contractor shall provide all labor and equipment for the disposal of all soils containing PCBs between 10 and 500 ppm, approximately 1,170 cubic yards. The Contractor shall also provide all equipment and labor for the disposal of generated waste, including decontamination and laboratory items. The Contractor shall dispose of these soils and wastes in the Grayback Mountain facility in Clives, Utah, an approved

chemical waste landfill. The Contractor shall retain only chemical waste landfills which comply with 40 CFR 761.75. The Contractor shall be permitted to retain only disposal sites listed on table 3. Soil will be transported offsite by means of lined and tarped gondola railroad cars. Below are the specifications for rail cars, liners and tarps. Soil containing concentrations of PCBs less than 500 ppm will be transported by rubber-tired, front-end loader directly into the gondola cars on the Ruco rail siding. The material will be excavated and placed into the loader at the perimeter of the exclusion zone. Both the loading area and rail siding area will be covered with polyethylene sheeting, and good housekeeping practices will be observed at all times. Any excess material from the loader's bucket will be kept in the exclusion zone. The outside of the loader bucket will be decontaminated and a hinged steel cover will be closed on the bucket to prevent spillage during site transport, and secured. Material will be loaded directly from the loader bucket into rail cars in an ongoing process throughout the work day. Once each gondola car is filled, it will be tarped prior to transport. If any car is left overnight for storage, the car will be covered and secured before the end of the day. The projected schedule assumes that approximately one car will be loaded each day.

The Contractor shall provide notice to the Owner, USEPA and New York State Department of Environmental Conservation (NYSDEC) of the transport and disposal of all excavated soils at least 10 business days prior to commencement. If the retained disposal location is outside of New York State, the Contractor shall also notify the Owner and the appropriate State Environmental Official in the receiving facility's state. The notification shall be written and must include the following:

1. name and location of the facility which shall receive the waste;
2. types and quantities of waste;
3. the expected shipping schedule; and
4. method of waste transport.

The notice to dispose waste material at the Grayback Mountain facility, Clives, Utah, will be given to the Utah Department of Health, Bureau of Solid and Hazardous Waste. Notice of the treatment and disposal of waste material at the Aptus facility, Coffeeville, Kansas, will be given to the Kansas Department of Health and Environment, Waste Management Bureau.

1.9 Record Keeping and Documentation

The Contractor shall provide the Owner's Site Representative with copies of daily inventory records regarding labor, equipment and all materials used during the remedial project, on a weekly basis. The inventory must provide detailed breakdowns of personnel and manpower hours, all equipment types and equipment hours and bulk volume for material used. In addition to the Contractor's daily inventory, the Contractor shall also supply a weekly progress report summarizing work completed during the previous week, a summary of the manpower/personnel and materials used during the previous week, problems encountered resulting in a change of the scope of work or Contractor delays, corrective actions taken to rectify problems, project objectives for the upcoming week and an estimate of the percentage of the project completed to date. The inventory and progress report shall be provided by the Contractor to the Owner's Site Representative each Monday morning prior to beginning work for the week.

The Contractor shall provide the Owner's Site Representative with all certificates and permits required to complete the project. Certificates required include, but are not

limited to, insurance certificates, 29 CFR 1910.120 certificates, operating and construction licensing. Permits necessary to complete the scope of work required by the Town of Hicksville, the County of Nassau, the State of New York, or the USEPA, shall be obtained by the Contractor. The Contractor shall provide copies of all manifests to the Owner's Site Representative.

The Contractor shall maintain either originals or exact copies of all records, documents and information pertaining to site operations for a period of 10 years after the certification of completion of the remedial action by the USEPA. After the 10-year period has elapsed, the Contractor shall notify the Owner or Owner's Site Representative at least 90 days prior to the destruction of any records. At either the Owner's or Owner's Site Representative' request, the Contractor shall provide copies of all records, documents or information to the requesting party.

1.10 Site Closure

1.10.1 Backfilling and Grading

Based on results from verification sampling, the Owner's Site Representative shall instruct the Contractor when a Work Area may be backfilled. Upon receipt of such instruction, the Contractor shall first replace or repair any utilities that have been removed or damaged and replace the storm sewer as described in Section 1.10.2. Backfill material shall be placed in uniform horizontal layers of 1-foot lifts or less. The fill shall be placed, working from clean or previously filled areas, into the area being filled. The fill material shall be compacted using vibrating compaction equipment. Backfill placed in the sump shall not be compacted. Specifications for the fill material are attached in Section 2.1.

The fill material shall be compacted to 90 percent of its maximum density at, or up to, 4 percent above optimum moisture content, as determined and controlled in accordance with

Method ASTM D 698 Moisture-Density Relation of Soils. The Contractor shall apply water or aerate the fill material, as necessary, to obtain a moisture content that permits the required compaction. Compaction shall be sufficient to prevent depressions resulting from settlement. The Contractor shall perform field density tests upon completion of back-filling each Work Area. The tests shall be completed only under supervision of the Owner's Site Representative. Field density tests shall be conducted at two locations in each Work Area selected by the Owner's Site Representative. The Contractor should refill any settled areas or depressions that occur within six (6) months after conditional acceptance of the work.

Each Work Area, exclusive of Sump 3, shall be backfilled to within six (6) inches of the final grade. Final grade is defined as the pre-excavation surface. Final grade control by the Contractor shall require a smooth transition from the surface of the adjacent unexcavated areas to the re-established grade of the excavated areas. The final grade elevation shall be based on the elevations established in each Work Area prior to beginning remedial activities (Section 1.5.3). The final grade shall be sloped to allow surface runoff to drain away from the pilot plant and toward settling basins. No low areas, that would enable water to pool, shall be permitted.

1.10.2 Replacement of Storm Sewer and Settling Basins

The storm sewer and settling basins removed during excavation shall be replaced by the Contractor. The settling basins and piping will consist of material specified in Sections 2.5 and 2.8. The settling basins shall be located at their original positions and shall be set vertically using the control elevation obtained prior to removal (Section 1.5.3).

The inverts and slope of the replacement pipe shall be set according to the control elevations obtained prior to construction (Section 1.5.3). The replacement pipe shall be of equal diameter and follow the same route as the pipe that was removed. The pipe shall be set on 3 inches of compacted sand. The pipe shall be covered with 6 inches of sand which shall be compacted prior to placing the remaining backfill.

1.10.3 Removal of Shoring

All sheet piling and shoring material shall be removed from the ground by the Contractor after backfilling has been completed to a point where instability of the soils and threats to the structural integrity of the pilot plant or overload piping no longer exists. All shoring materials shall be removed from the site.

1.10.4 Pavement Replacement

Pavement shall be replaced by the Contractor in Work Areas only where it had existed prior to excavation. The extent of existing pavement is shown on plates 2 and 3. Sub-base material shall be placed over the compacted fill and compacted to a finished thickness of 3 inches. The surface of the finished sub-base shall be 3 inches below the final grade. The sub-base material shall be placed and spread in uniform horizontal layers in such a manner as to avoid segregation of the material according to grain size. The sub-base shall be compacted using vibrating compaction equipment to 90 percent of its maximum density at, or up to, 4 percent above optimum moisture content, as determined and controlled in accordance with Method ASTM D698. Asphalt shall be installed on top of the sub-base and compacted so that the asphalt is 3 inches thick and the surface conforms to the requirements for final grade. The asphalt shall be placed, spread and struck-off using an acceptable bituminous paver. Inaccessible and small areas shall be paved by hand. Joints with the cut edges of